

Diode—Sharp-Cutoff Twin-Plate Tetrode

9-PIN MINIATURE TYPE

For Frequency-Divider and Complex-Wave-Generator
Circuits of Electronic Musical Instruments

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC). 6.3 $\pm$ 10% volts
Current at 6.3 volts. 0.3 amp

Direct Interelectrode Capacitances:▲

Tetrode Unit:

Grid No.1 to plate A. 0.04 $\mu\mu\text{f}$
Grid No.1 to plate B. 0.03 max. $\mu\mu\text{f}$
Grid No.1 to cathode & internal
shield, grid No.2, and heater . . . 5.5 $\mu\mu\text{f}$
Plate A to cathode & internal
shield, grid No.2, and heater . . . 1.8 $\mu\mu\text{f}$
Plate B to cathode & internal
shield, grid No.2, and heater . . . 1.8 $\mu\mu\text{f}$
Tetrode grid No.1 to diode plate. . . . 0.022 $\mu\mu\text{f}$
Tetrode plate A to diode plate. 0.02 max. $\mu\mu\text{f}$
Tetrode plate B to diode plate. 0.055 $\mu\mu\text{f}$

Characteristics, Class A₁ Amplifier (Tetrode Unit):

Plates A and B connected together

Plate Voltage 100 volts
Grid-No.2 Voltage 100 volts
Grid-No.1 Supply Voltage. 0 volts
Grid-No.1 Resistor (Bypassed) 2.2 megohms
Plate Resistance (Approx.). 90000 ohms
Transconductance. 3200 μmhos
Plate Current 3.8 ma
Grid-No.2 Current 1.7 ma
Grid-No.1 Voltage (Approx.) for
plate $\mu\text{a} = 20$ -4 volts

*Using either Plate A or B, with plate
not in use connected to ground*

Plate Voltage 100 volts
Grid-No.2 Voltage 100 volts
Grid-No.1 Supply Voltage. 0 volts
Grid-No.1 Resistor (Bypassed) 2.2 megohms
Plate Resistance (Approx.). 130000 ohms
Transconductance. 1900 μmhos
Plate Current 2.2 ma
Grid-No.2 Current 3 ma

Mechanical:

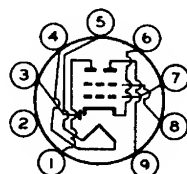
Operating Position. Any
Maximum Overall Length. 2-5/8"
Maximum Seated Length 2-3/8"



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Length, Base Seat to Bulb Top (Excluding tip) . . . 2" $\pm$ 3/32"
 Diameter. 0.750" to 0.875"
 Dimensional Outline See *General Section*
 Bulb. T6-1/2
 Base. Small-Button Noval 9-Pin (JEDEC No. E9-1)
 Basing Designation for BOTTOM VIEW. 9MR

Pin 1-Tetrode
 Plate B
 Pin 2-No Connec-
 tion
 Pin 3-Diode Plate
 Pin 4-Heater
 Pin 5-Heater



Pin 6-Cathode,
 Internal
 Shield
 Pin 7-Tetrode
 Grid No.1
 Pin 8-Tetrode
 Grid No.2
 Pin 9-Tetrode
 Plate A

FREQUENCY-DIVIDER & COMPLEX-WAVE-GENERATOR SERVICE TETRODE UNIT

Maximum Ratings, Design-Maximum Values:

PLATE A VOLTAGE 330 max. volts
 PLATE B VOLTAGE 330 max. volts
 GRID-No.2 (SCREEN-GRID)

SUPPLY VOLTAGE. 330 max. volts
 GRID-No.2 VOLTAGE See *Grid-No.2 Input Rating Chart*
 at front of Receiving Tube Section

GRID-No.1 (CONTROL-GRID) VOLTAGE:

Negative-bias value 50 max. volts
 Positive-bias value 0 max. volts

GRID-No.2 INPUT:

For grid-No.2 voltages
 up to 165 volts 0.65 max. watt
 For grid-No.2 voltages
 between 165 and 330 volts . See *Grid-No.2 Input Rating Chart*
 at front of Receiving Tube Section

PLATE A DISSIPATION 1.5 max. watts

PLATE B DISSIPATION 1.5 max. watts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode . 200 max. volts
 Heater positive with respect to cathode . 200[•] max. volts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:

For grid-No.1-resistor-bias operation . 2.2 max. megohms

DIODE UNIT

Maximum Ratings, Design-Maximum Values:

PLATE CURRENT 1 max. ma

Characteristics, Instantaneous Test Condition:

Plate Current for plate volts = 10. 2 ma

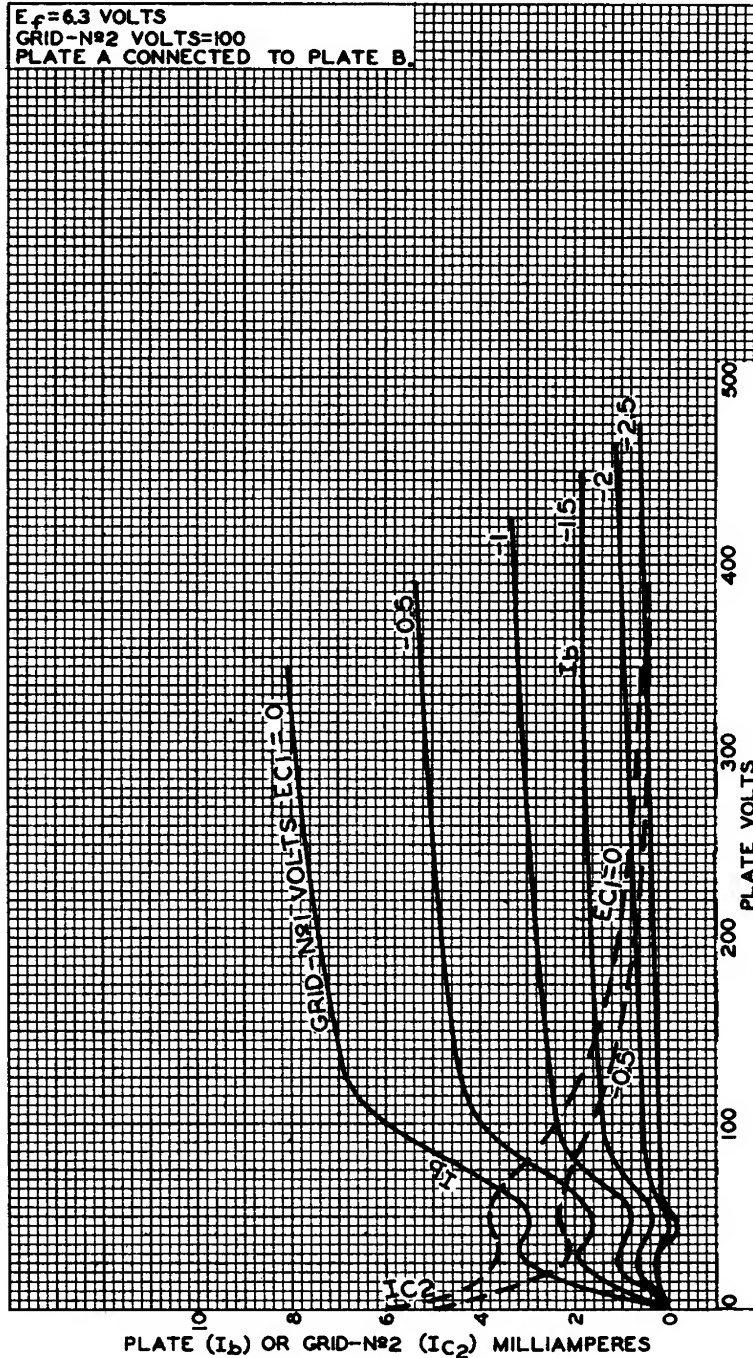
[▲] Without external shield.

[•] The dc component must not exceed 100 volts.



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AVERAGE CHARACTERISTICS Tetrode Unit



92CM-10693

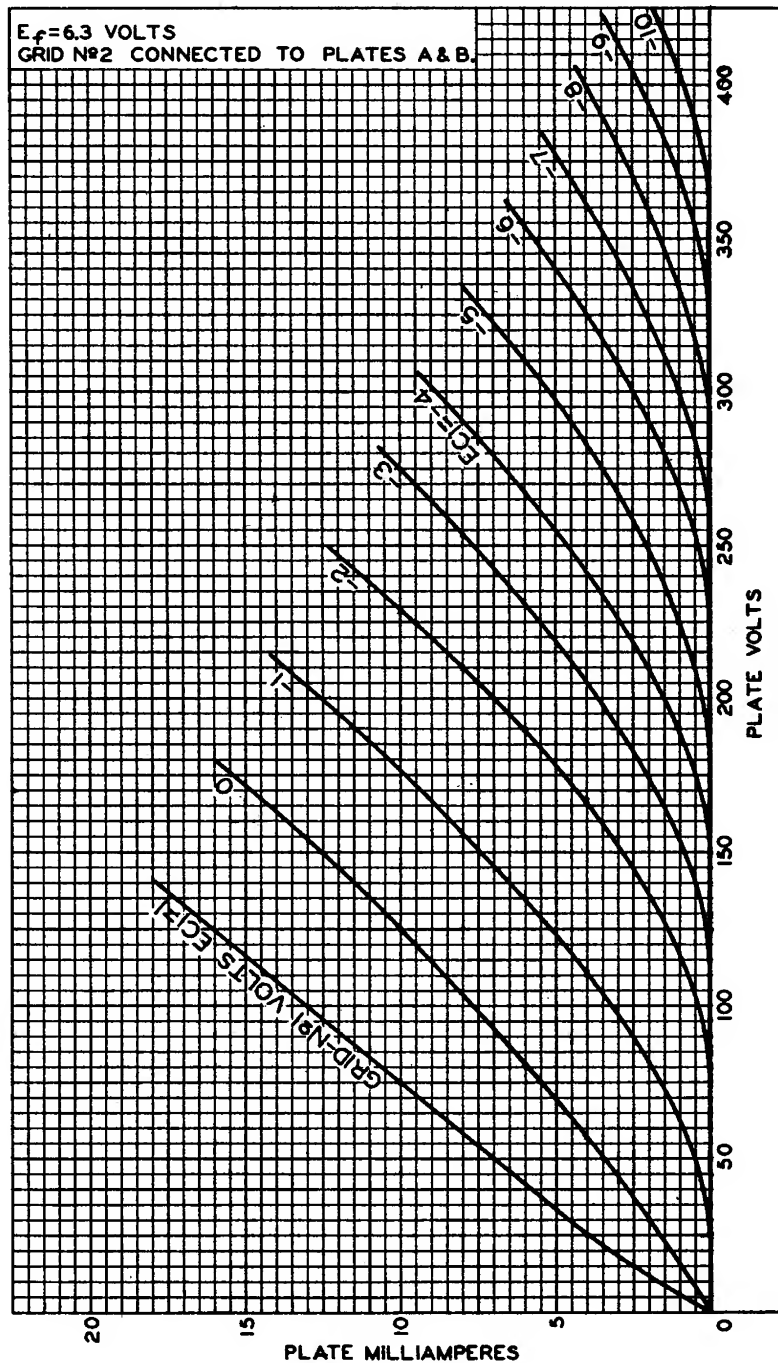


RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

DATA 2
8-60

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AVERAGE PLATE CHARACTERISTICS Tetrode Unit—Triode Connection



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